elementec

Software & Consulting Dr. Peter Kullmann

User's Guide

GONIAT

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Introduction

1

This manual describes the GONIAT desktop program, version 3.5.1

The installation package can be downloaded from http://www.goniat.org/goniat_desktop.html.

After downloading, extract the installation archive to a local folder. Start the installation by executing Setup.exe. The installation program sets up GONIAT on your computer. After installation you may safely delete the installation files.

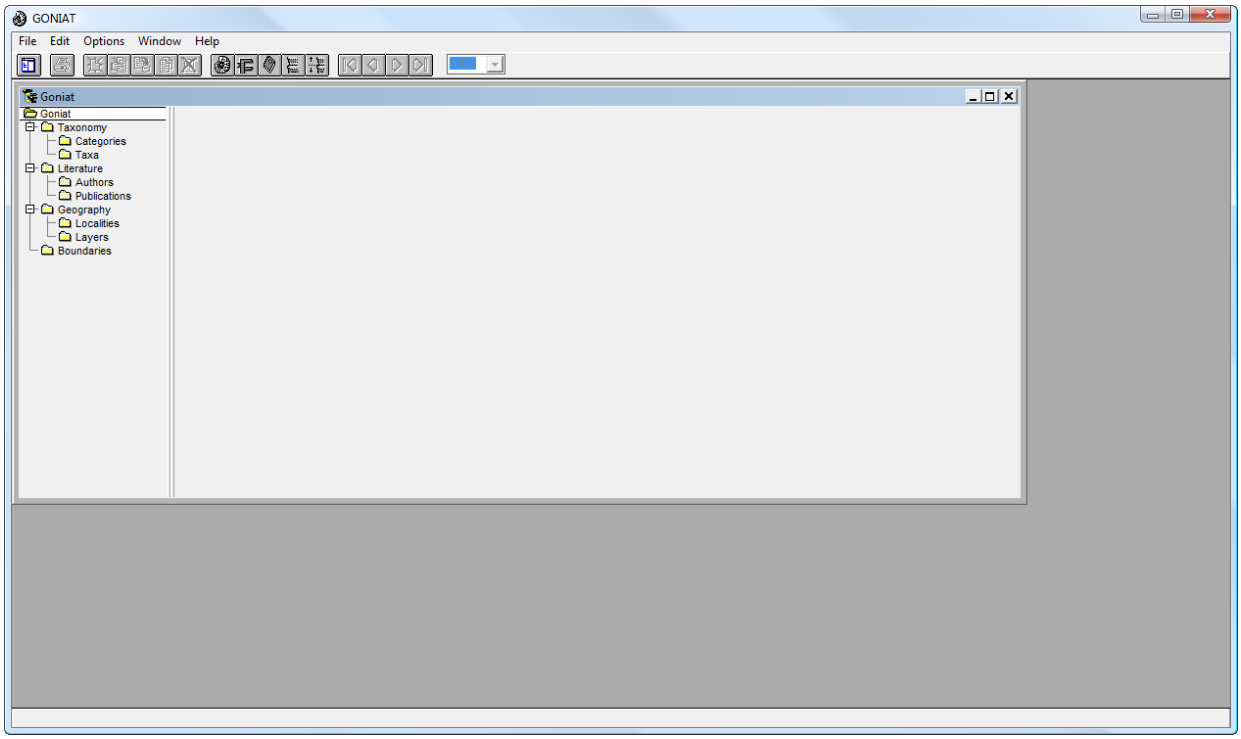
Overview 2

The GONIAT data stored in a database, composed of a number of tables, each containing records of a specific kind. The most prominent tables contain **taxa** data, **publications** data and **layers** data. To represent the hierarchical nature of taxonomic as well as geographic information, records in the tables **Categories** for taxa and **Localities** for layers represent the different levels within those hierarchies. Some complementary information is stored in the tables **Authors** and **Boundaries.**

Taxa records and **Layers** records reference records in the other tables and combine them to a complete data set.

The database also allows for cross references between some types of records. Basically, there are three such associations, namely between taxa and publications, between taxa and layers and between publications and layers.

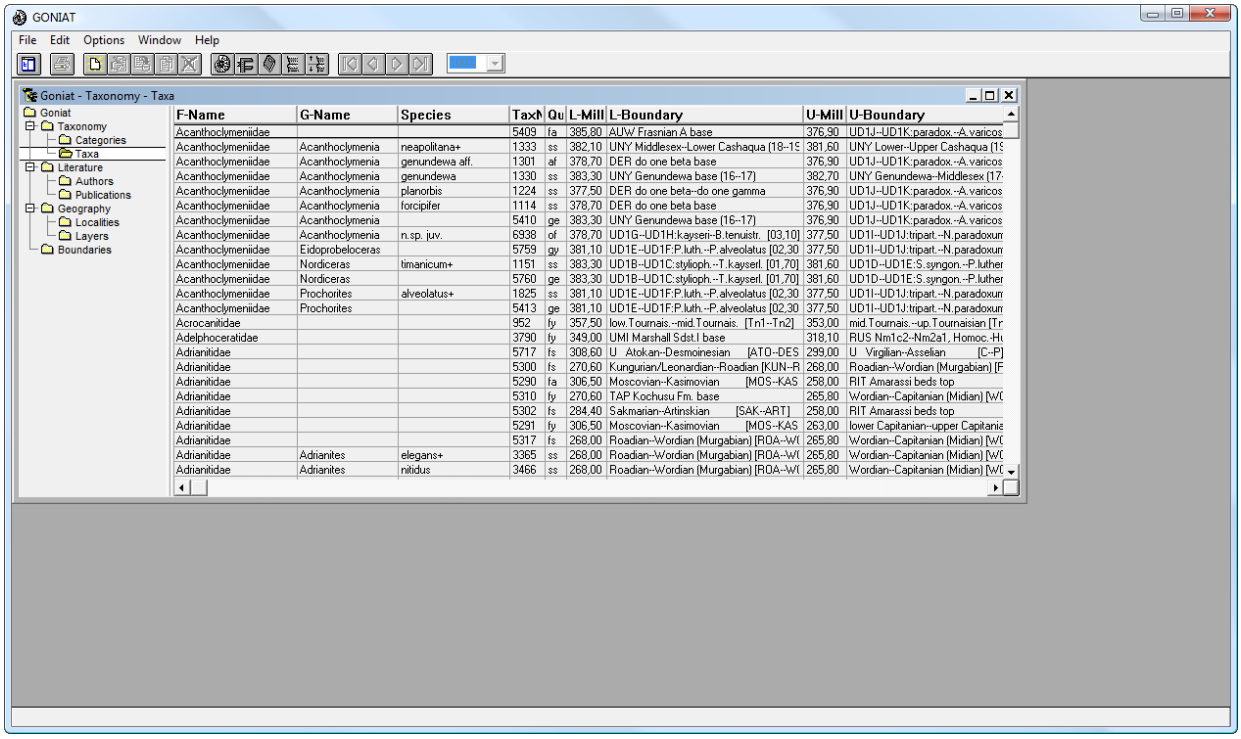
If GONIAT is started, the GONIAT main window is shown.



The program window contains a menu bar and a toolbar at the top. The center area initially shows a window with the database structure. To view a list of records within a table, click on the table name in the tree view.

Overview

2


GONIAT
File Edit Options Window Help
Goniat - Taxonomy - Taxa
Goniat
Taxonomy
Categories
Taxa
Literature
Authors
Publications
Geography
Localities
Layers
Boundaries
F-Name G-Name Species TaxN Qu L-Mill L-Boundary U-Mill U-Boundary
Acanthoclymeniidae 5409 fa 385,80 AUW Frasnian A base 376,90 UD1J--UD1K:paradox.--A.varicos
Acanthoclymeniidae Acanthoclymenia neapolitana+ 1333 ss 382,10 UNY Middlesex--Lower Cashaqua (18--1S 381,60 UNY Lower--Upper Cashaqua (1S
Acanthoclymeniidae Acanthoclymenia genundewa aff. 1301 af 378,70 DER do one beta base 376,90 UD1J--UD1K:paradox.--A.varicos
Acanthoclymeniidae Acanthoclymenia genundewa 1330 ss 383,30 UNY Genundewa base (16--17) 382,70 UNY Genundewa--Middlesex (17
Acanthoclymeniidae Acanthoclymenia planorbis 1224 ss 377,50 DER do one beta--do one gamma 376,90 UD1J--UD1K:paradox.--A.varicos
Acanthoclymeniidae Acanthoclymenia forcipifer 1114 ss 378,70 DER do one beta base 376,90 UD1J--UD1K:paradox.--A.varicos
Acanthoclymeniidae Acanthoclymenia 5410 ge 383,30 UNY Genundewa base (16--17) 376,90 UD1J--UD1K:paradox.--A.varicos
Acanthoclymeniidae Acanthoclymenia n.sp. juv. 6938 of 378,70 UD1G--UD1H:kayseri--B.tenuistr. [03,10] 377,50 UD1I--UD1J:tripart.--N.paradoxur
Acanthoclymeniidae Eidoprobeloceras 5759 gy 381,10 UD1E--UD1F:P.luth.--P.alveolatus [02,30 377,50 UD1I--UD1J:tripart.--N.paradoxur
Acanthoclymeniidae Nordiceras timanicum+ 1151 ss 383,30 UD1B--UD1C:stylioph.--T.kayserl. [01,70] 381,60 UD1D--UD1E:S.syngon.--P.luther
Acanthoclymeniidae Nordiceras 5760 ge 383,30 UD1B--UD1C:stylioph.--T.kayserl. [01,70] 381,60 UD1D--UD1E:S.syngon.--P.luther
Acanthoclymeniidae Prochorites alveolatus+ 1825 ss 381,10 UD1E--UD1F:P.luth.--P.alveolatus [02,30 377,50 UD1I--UD1J:tripart.--N.paradoxur
Acanthoclymeniidae Prochorites 5413 ge 381,10 UD1E--UD1F:P.luth.--P.alveolatus [02,30 377,50 UD1I--UD1J:tripart.--N.paradoxur
Acrocanitidae 952 fy 357,50 low.Tournais.--mid.Tournais. [Tn1--Tn2] 353,00 mid.Tournais.--up.Tournaisian [Tr
Adelphoceratidae 3790 fy 349,00 UMI Marshall Sdst.l base 318,10 RUS Nm1c2--Nm2a1, Homoc.-Hu
Adrianitidae 5717 fs 308,60 U Atokan--Desmoinesian [ATO--DES 299,00 U Virgilian--Asselian [C--P]
Adrianitidae 5300 fs 270,50 Kungurian/Leonardian--Roadian [KUN--R 268,00 Roadian--Wordian (Murgabian) [F
Adrianitidae 5290 fa 306,50 Moscovian--Kasimovian [MOS--KAS 258,00 RIT Amarassi beds top
Adrianitidae 5310 fy 270,60 TAP Kochusu Fm. base 265,80 Wordian--Capitanian (Midian) [W(
Adrianitidae 5302 fs 284,40 Sakmarian--Artinskian [SAK--ART] 258,00 RIT Amarassi beds top
Adrianitidae 5291 fy 306,50 Moscovian--Kasimovian [MOS--KAS 263,00 lower Capitanian--upper Capitania
Adrianitidae 5317 fs 268,00 Roadian--Wordian (Murgabian) [ROA--Wl 265,80 Wordian--Capitanian (Midian) [W(
Adrianitidae Adrianites elegans+ 3365 ss 268,00 Roadian--Wordian (Murgabian) [ROA--Wl 265,80 Wordian--Capitanian (Midian) [W(
Adrianitidae Adrianites nitidus 3466 ss 268,00 Roadian--Wordian (Murgabian) [ROA--Wl 265,80 Wordian--Capitanian (Midian) [W(

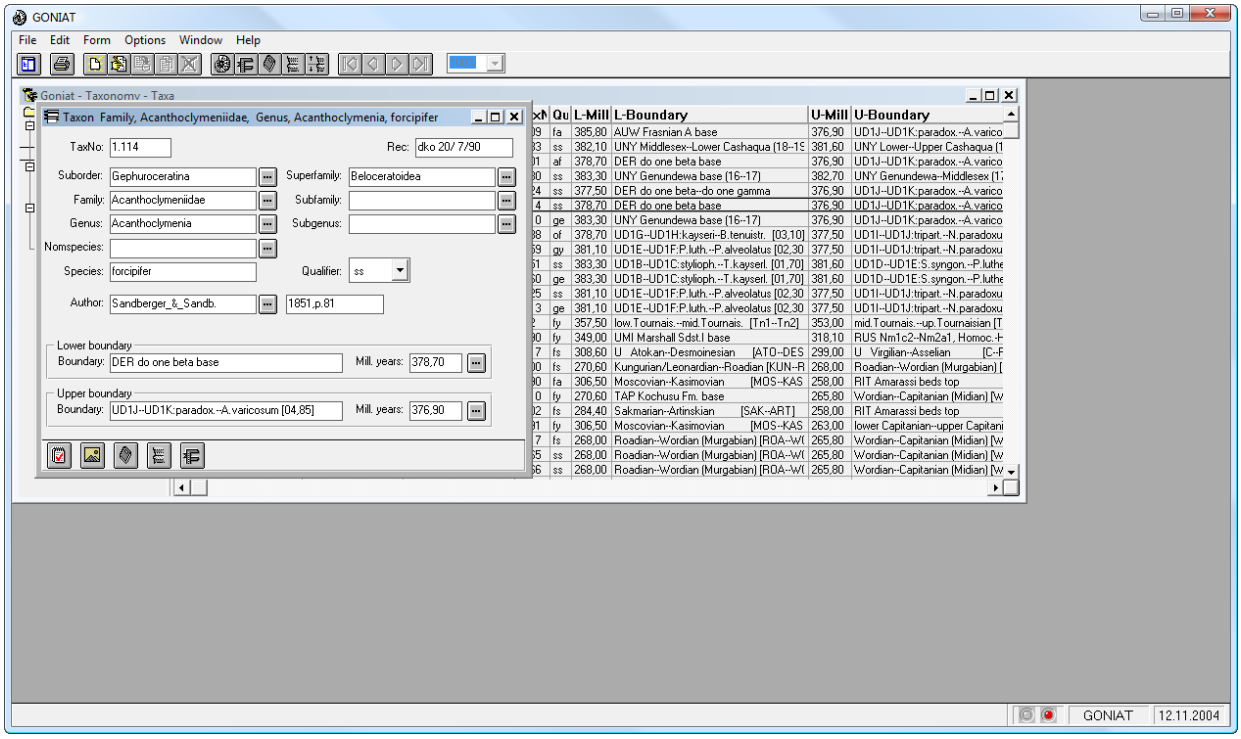
The table to the right of the tree view shows all records in that table. After clicking a row in the table, the status bar shows the number of records within the table.
Table columns can be resized and reordered. To resize a column, move the mouse to the space between two column headers, where the mouse pointer changes its shape. Then use Drag&Drop to resize the column. To reorder the columns click inside a column header and move to the desired position in the table using Drag&Drop.

➔ Tables are always automatically sorted according to the two left-most columns. To change the sort order, just place the desired columns at the very left of the table.

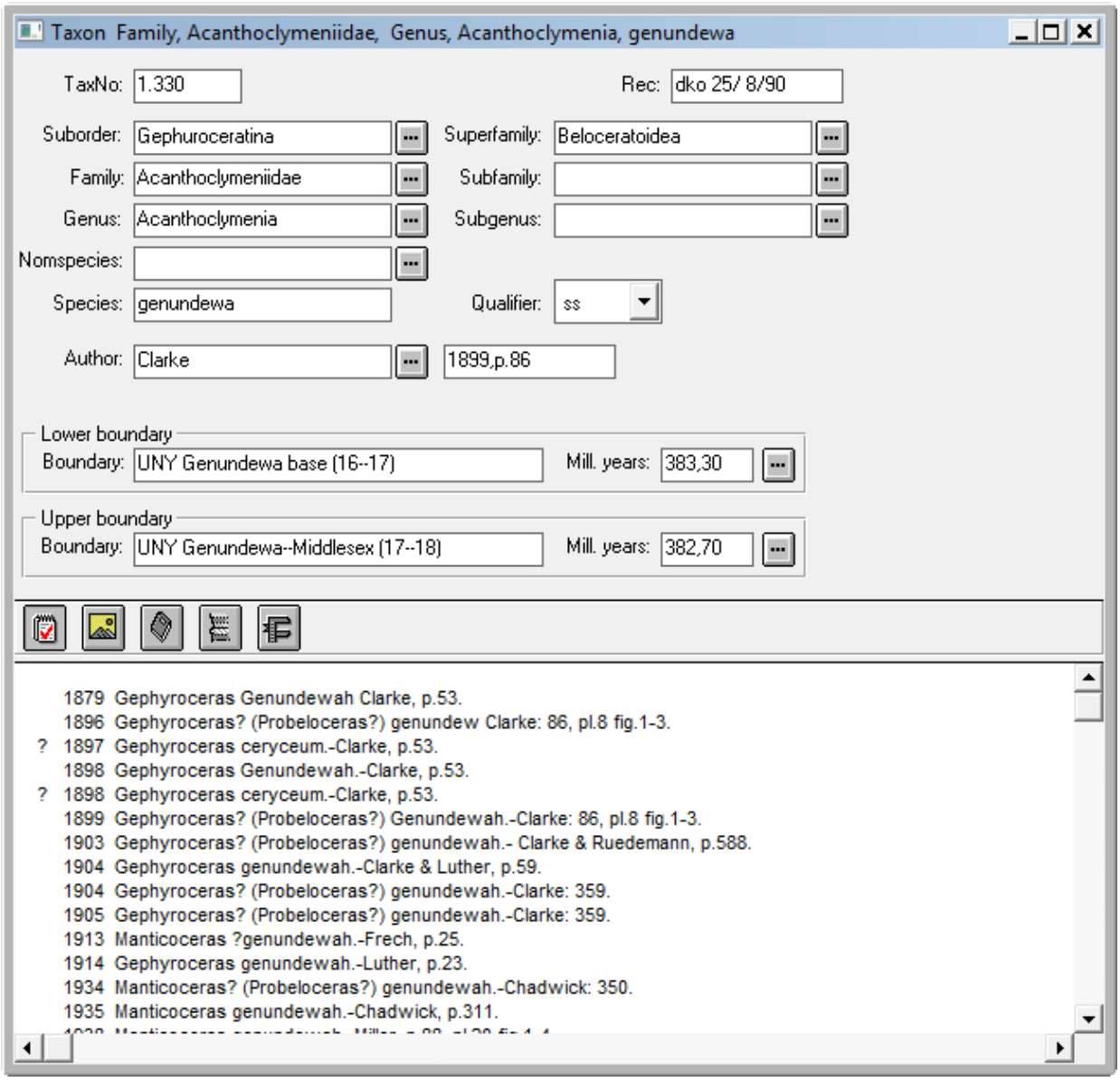
To open a record for viewing, double-click on the corresponding table row. This will open a new window containing the record details.

Overview

2

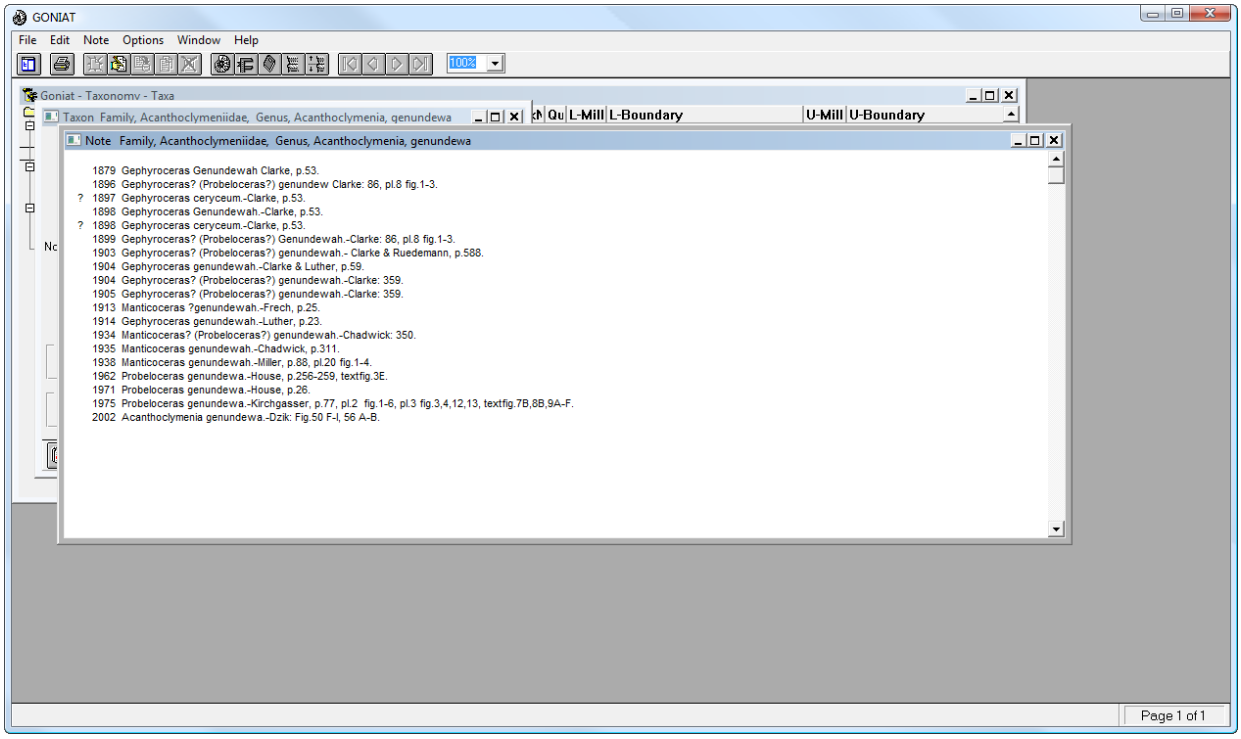

GONIAT
File Edit Form Options Window Help
Goniat - Taxonomy - Taxa
Taxon Family, Acanthoclymeniidae, Genus, Acanthoclymenia, forcipifer
TaxNo: 1.114
Rec: dko 20/ 7/90
Suborder: Gephuroceratina
Superfamily: Beloceratoidea
Family: Acanthoclymeniidae
Subfamily:
Genus: Acanthoclymenia
Subgenus:
Nomspecies:
Species: forcipifer
Qualifier: ss
Author: Sandberger_&_Sandb.
1851,p.81
Lower boundary
Boundary: DER do one beta base
Mill. years: 378,70
Upper boundary
Boundary: UD1J--UD1K:paradox.--A.varicosum [04,85]
Mill. years: 376,90
Qu L-Mill L-Boundary U-Mill U-Boundary
fa 385,80 AUW Frasnian A base 376,90 UD1J--UD1K:paradox.--A.varico
ss 382,10 UNY Middlesex--Lower Cashaqua [18--19 381,60 UNY Lower--Upper Cashaqua [1
af 378,70 DER do one beta base 376,90 UD1J--UD1K:paradox.--A.varico
ss 383,30 UNY Genundewa base (16--17) 382,70 UNY Genundewa--Middlesex [1
ss 377,50 DER do one beta--do one gamma 376,90 UD1J--UD1K:paradox.--A.varico
ss 378,70 DER do one beta base 376,90 UD1J--UD1K:paradox.--A.varico
ge 383,30 UNY Genundewa base (16--17) 376,90 UD1J--UD1K:paradox.--A.varico
of 378,70 UD1G--UD1H:kayseri--B.tenuistr. [03,10] 377,50 UD1I--UD1J:tripart.--N.paradoxu
gy 381,10 UD1E--UD1F:P.luth.--P.alveolatus [02,30 377,50 UD1I--UD1J:tripart.--N.paradoxu
ss 383,30 UD1B--UD1C:stylioph.--T.kayserl. [01,70] 381,60 UD1D--UD1E:S.syngon.--P.luthe
ge 383,30 UD1B--UD1C:stylioph.--T.kayserl. [01,70] 381,60 UD1D--UD1E:S.syngon.--P.luthe
ge 381,10 UD1E--UD1F:P.luth.--P.alveolatus [02,30 377,50 UD1I--UD1J:tripart.--N.paradoxu
fy 357,50 low.Tournais.--mid.Tournais. [Tn1--Tn2] 353,00 mid.Tournais.--up.Tournaisian [T
fy 349,00 UMI Marshall Sdst.l base 318,10 RUS Nm1c2--Nm2a1, Homoc.-
fs 308,60 U Atokan--Desmoinesian [ATO--DES 299,00 U Virgilian--Asselian [C-
fa 306,50 Moscovian--Kasimovian [MOS--KAS 258,00 RIT Amarassi beds top
fy 270,60 TAP Kochusu Fm. base 265,80 Wordian--Capitanian (Midian) [W
fs 284,40 Sakmarian--Artinskian [SAK--ART] 258,00 RIT Amarassi beds top
fy 306,50 Moscovian--Kasimovian [MOS--KAS 263,00 lower Capitanian--upper Capitani
fs 268,00 Roadian--Wordian (Murgabian) [ROA--WI 265,80 Wordian--Capitanian (Midian) [W
ss 268,00 Roadian--Wordian (Murgabian) [ROA--WI 265,80 Wordian--Capitanian (Midian) [W
ss 268,00 Roadian--Wordian (Murgabian) [ROA--WI 265,80 Wordian--Capitanian (Midian) [W
GONIAT
12.11.2004

The buttons at the bottom of the record window allow access to additional information, such as the memo field, images and associations with other records.
The view the information click on the corresponding button. The window expands downwards to show the information.

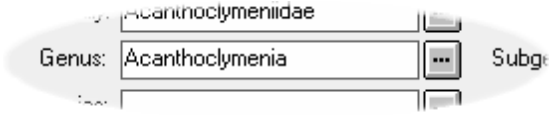


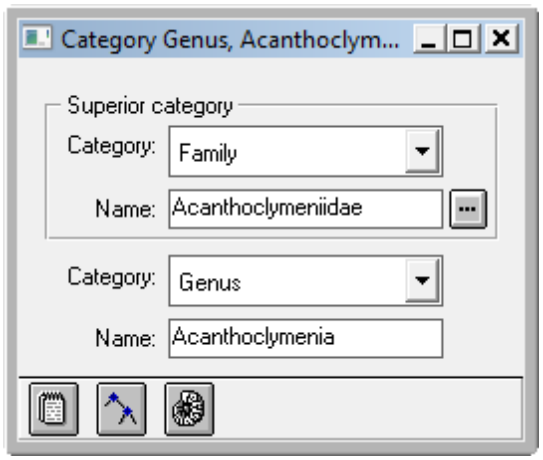
The buttons can also be double-clicked. In this case, a new window is opened to show the information.

Overview 2


GONIAT
File Edit Note Options Window Help
Goniat - Taxonomy - Taxa
Taxon Family, Acanthoclymeniidae, Genus, Acanthoclymenia, genundewa
L-Mill L-Boundary
U-Mill U-Boundary
Note Family, Acanthoclymeniidae, Genus, Acanthoclymenia, genundewa
1879 Gephyroceras Genundewah Clarke, p.53.
1896 Gephyroceras? (Probeloceras?) genundew Clarke: 86, pl.8 fig.1-3.
? 1897 Gephyroceras ceryceum.-Clarke, p.53.
1898 Gephyroceras Genundewah.-Clarke, p.53.
? 1898 Gephyroceras ceryceum.-Clarke, p.53.
1899 Gephyroceras? (Probeloceras?) Genundewah.-Clarke: 86, pl.8 fig.1-3.
1903 Gephyroceras? (Probeloceras?) genundewah.- Clarke & Ruedemann, p.588.
1904 Gephyroceras genundewah.-Clarke & Luther, p.59.
1904 Gephyroceras? (Probeloceras?) genundewah.-Clarke: 359.
1905 Gephyroceras? (Probeloceras?) genundewah.-Clarke: 359.
1913 Manticoceras ?genundewah.-Frech, p.25.
1914 Gephyroceras genundewah.-Luther, p.23.
1934 Manticoceras? (Probeloceras?) genundewah.-Chadwick: 350.
1935 Manticoceras genundewah.-Chadwick, p.311.
1938 Manticoceras genundewah.-Miller, p.88, pl.20 fig.1-4.
1962 Probeloceras genundewa.-House, p.256-259, textfig.3E.
1971 Probeloceras genundewa.-House, p.26.
1975 Probeloceras genundewa.-Kirchgasser, p.77, pl.2 fig.1-6, pl.3 fig.3,4,12,13, textfig.7B,8B,9A-F.
2002 Acanthoclymenia genundewa.-Dzik: Fig.50 F-I, 56 A-B.
Page 1 of 1

Where a button with three dots is shown next to a field, the field is a reference to another record and shows information from that record. In above example, the field Suborder, Superfamily, Family, Subfamily, etc, each reference a record from the **Categories** table. When the button is clicked, the referenced record is opened in a new window.

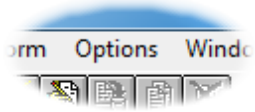




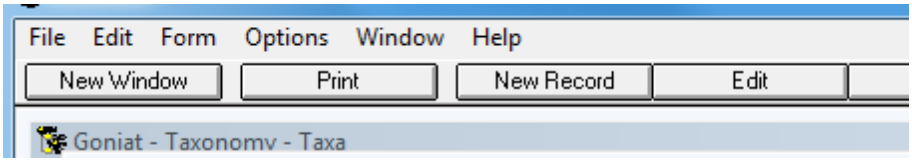
Customizing GONIAT

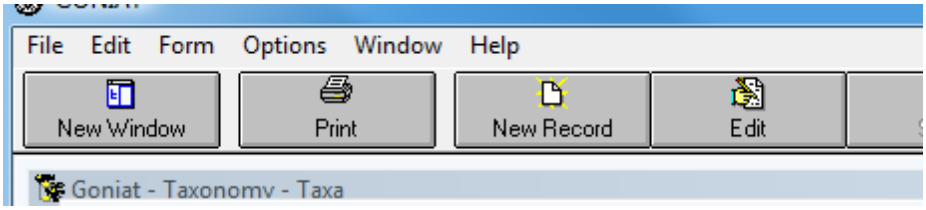
3

Customization options are available in the **Options** menu.



With the **Toolbars...** menu item, the appearance of tool bar buttons can be adapted such that a text is displayed instead of icons or in combination with the tool icons.





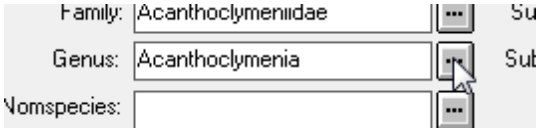
Editing a record 4

When a record window has been opened, its field are locked by default. This is to prevent accidental modifications.

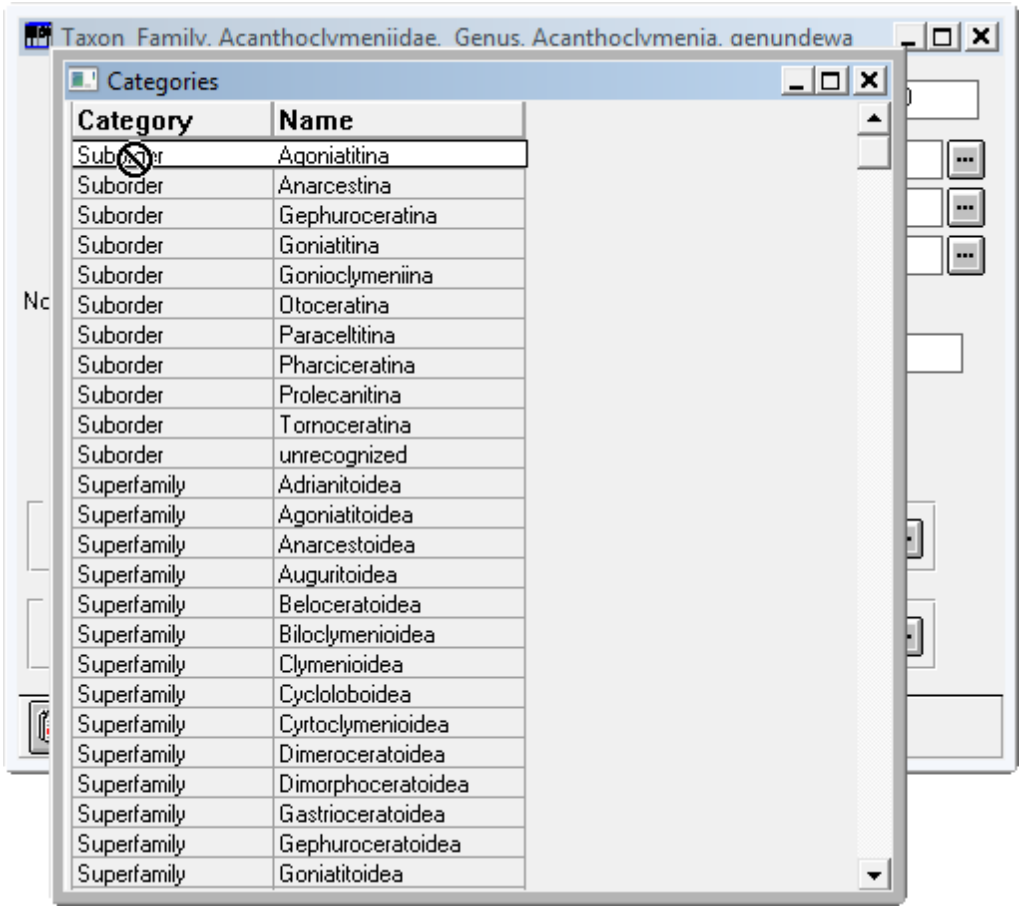
To allow modifications to record field, press the **Edit** button on the tool bar. Fields are then unlocked for editing.

Text and number field can be directly written into. Options fields can be changed by pressing the arrow button next to the field, which will open a drop down menu with available choices.

To change the linked record in reference field, press the button next to the field.



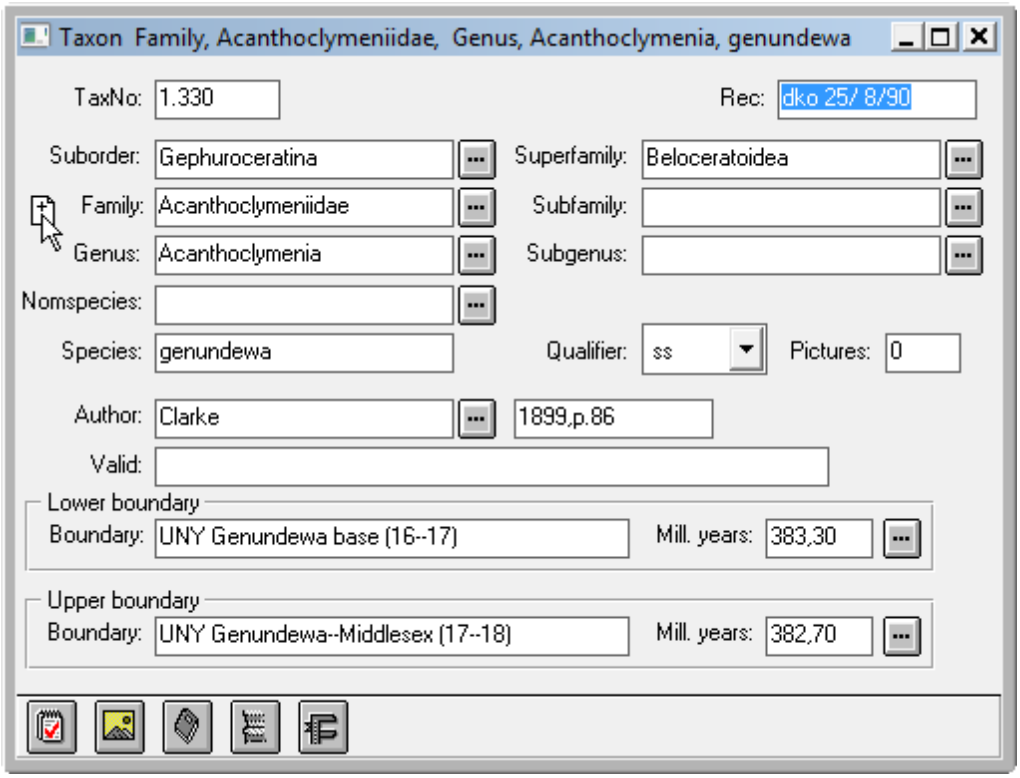
This will open a list with possible entries in a new window. Select an appropriate with the mouse and use Drag&Drop to move the selected record out of the selection window onto the underlying form.



Once the mouse reaches the form area, the selection list is closed automatically and gives access to the whole form. Now, you can move the mouse to the appropriate reference field and drop the selected record onto the field. The field contents will be updated with the new content.

Editing a record

4



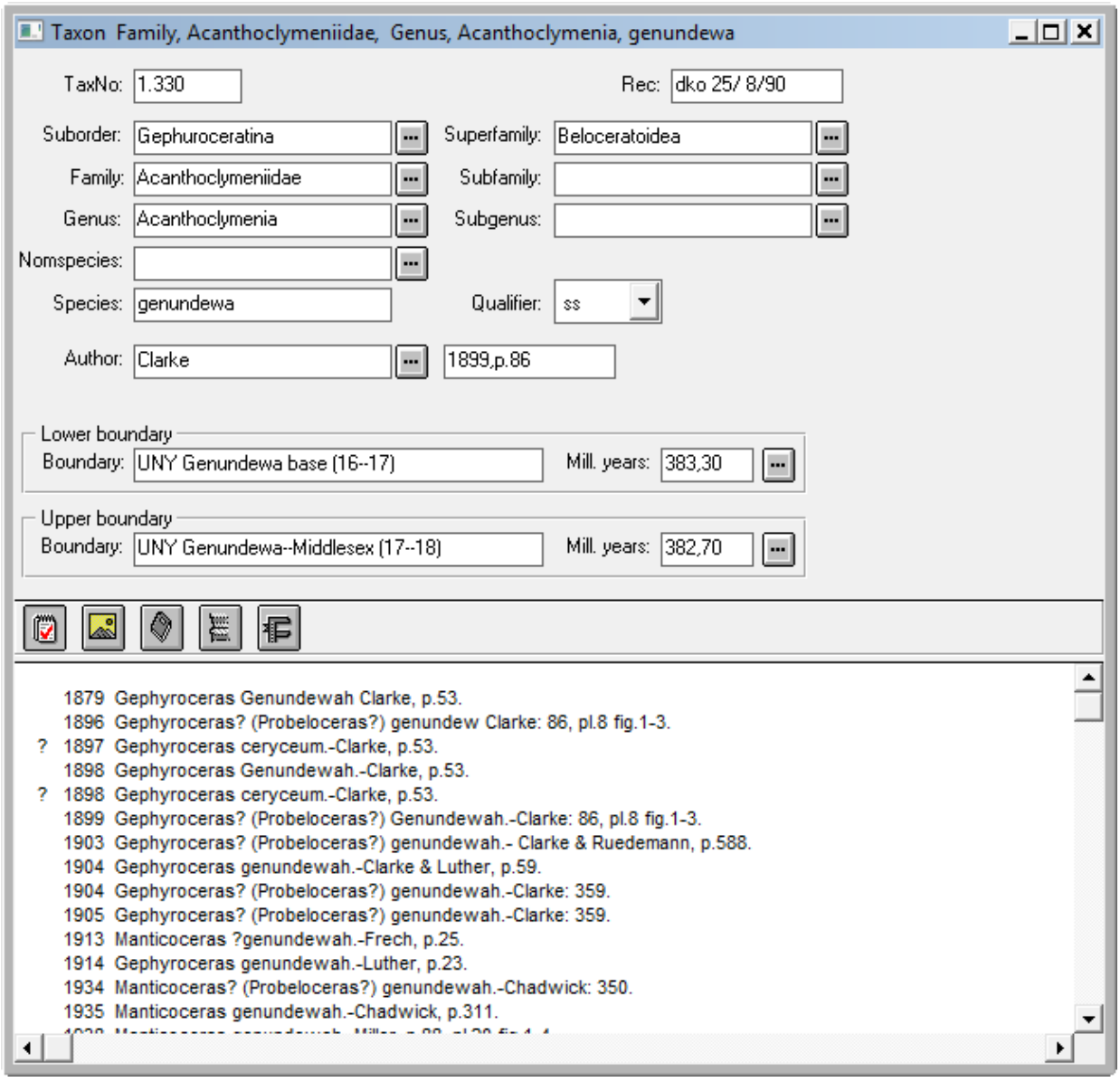
Note, that the program does not necessarily enforce, that a the reference selection is meaningful. It is up to the user to select an appropriate record from the selection list. In above example, the user has to make sure, that records of the corresponding categories are selected in to the fields.

Once, your are finished with your modifications, press the **Save** button , to save the changes to the database.

Editing a note

To edit a note, first open the note to be edited by clicking the **Note** button at the bottom of the form window.

The window will expand downwards and display the note.



Then press the **Edit** button on the tool bar at the top of the program window. The program switches to edit mode and allows to edit the note text. When finished, press the **Save** button to save the modified note to the database.

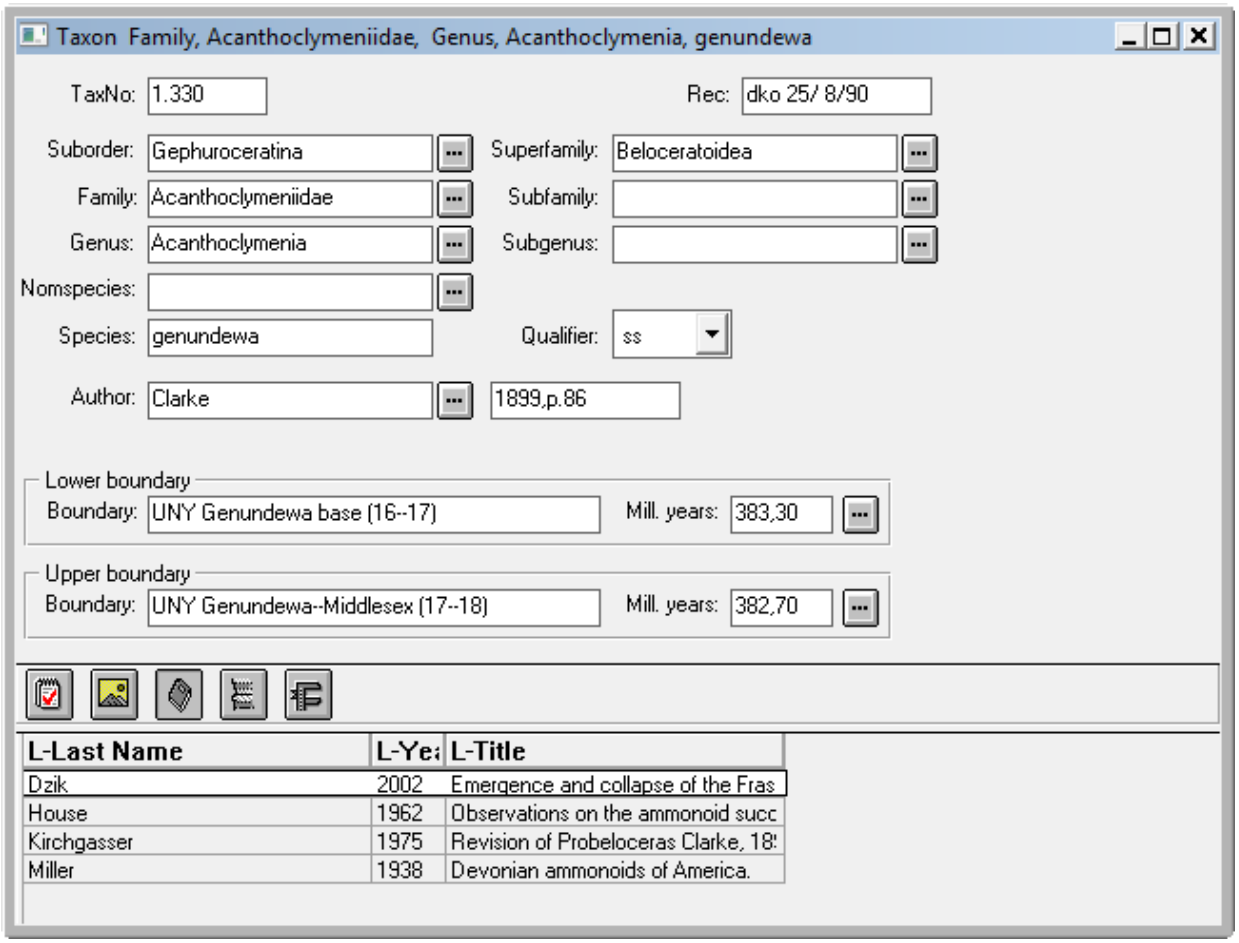
Editing associations

To edit associations of a record, first open the associations window by pressing the appropriate button at the bottom of the form window.

Here, the buttons for the associations to publications and layers from the Taxon record window are shown. If the publications button is pressed, a list with existing associations is shown in the expanded window.

Editing a record

4

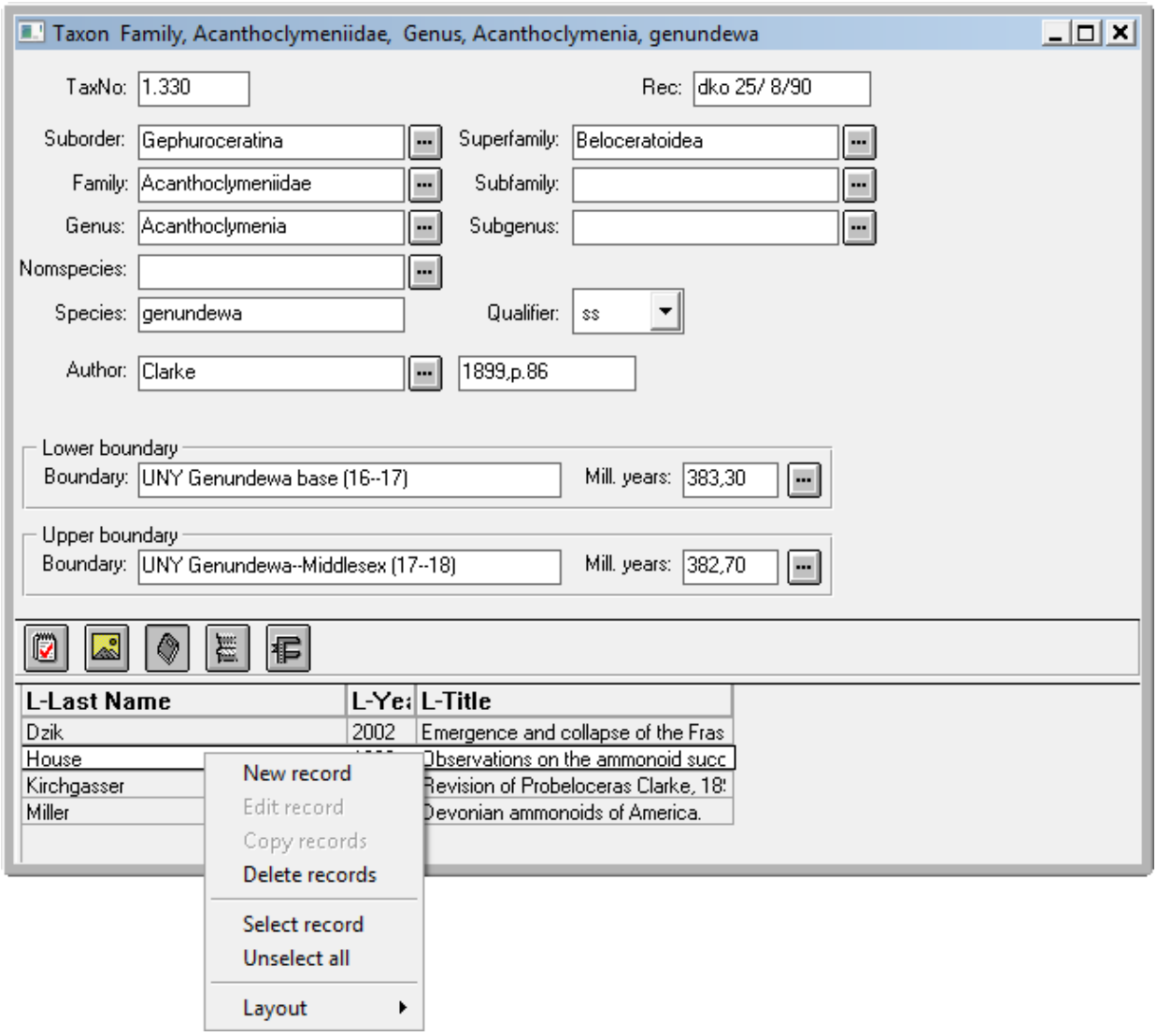


You can now add new associations are delete existing associations.

To add an association either press the **New Record** button on the top toolbar or press the right mouse button inside the list.

Editing a record

4



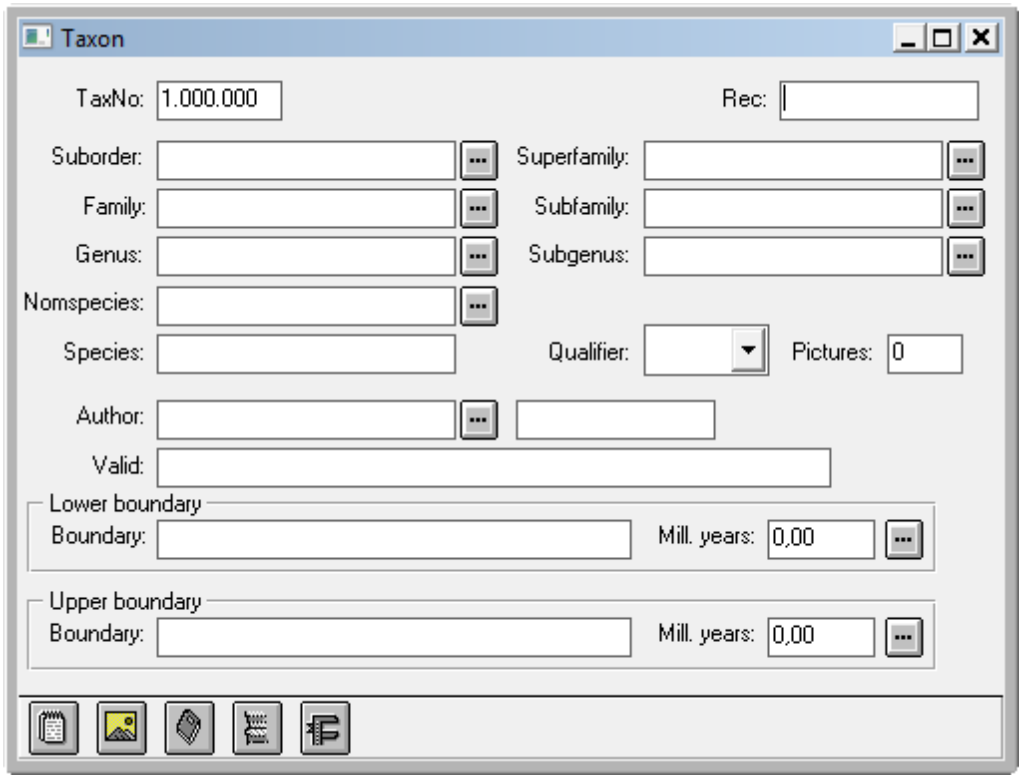
In the menu, select **New record**. This will open a selection list as described before in connection with reference fields. Analogously, a record can be dragged from the selection list into the association list. When the record is dropped, the association is immediately added to the database.

To delete a selected record from the associations list, use the menu item **Delete records** from the context menu. A message will show up, which lets you confirm the deletion ir cancel the operation.

Creating a taxon record

5

Before creating a new taxon record, be sure to set up required records in other tables as described in section *Prerequisites*.
Once the necessary data for categories, author and boundaries has been added, a new taxon record is added by pressing the button 'New Record' while viewing the **Taxa** table. This will open an empty taxon form window.



While some of the fields can be freely edited (TaxNo, Rec, Species, Qualifier, Pictures, Pages (right of Author), Valid) others are association fields with a button next to it. By pressing the button, a selection window with possible entries is opened, from where a specific record can be selected by dragging it on the appropriate form field. Note, that if the form field is covered by the selection window, you may simply drag the selected record out of the selection window, which will close the selection window and give free access to the underlying form. For more information on association fields refer to section *Editing associations*.

TaxNo - a unique record number. To see all used record numbers, change the sort order of the Taxa table to TaxNo by dragging the column to the very left of the table. You can determine the next free Taxno by moving to the bottom of the table.

Rec - intials and date of the editing person in the format xxx-dd/mm/yy, where xxx are the initial of the editor (jku = Jürgen Kullmann, dko = Dieter Korn). Unfortunately this field has not been used consistently.

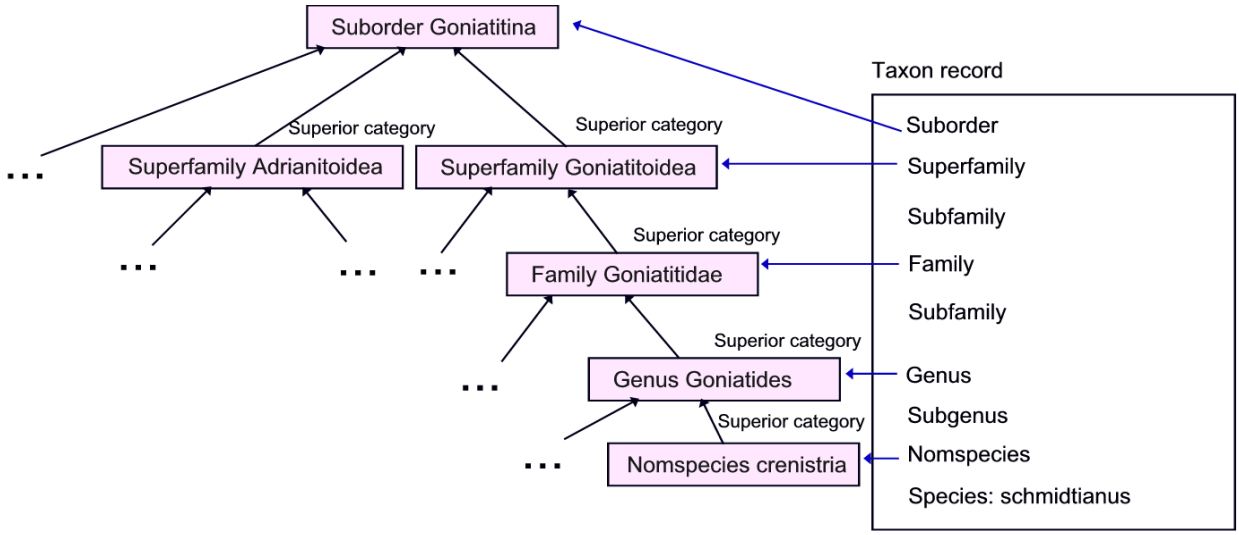
Suborder, Superfamily, Family, Subfamily, Genus, Subgenus, Nomspecies - associated Category records. Obviously, not all of these fields have to be filled. Also, it is possible to create taxon records, which are contain the detail description any of the categories in the hierarchy, by associating the categories just down a certain level.

➔ The user has to make sure, that the category fields are filled consistently with respect to the category structure (see *Prerequisites*). The program does not do any consistency checking here. The user has to take care not to associate wrong category types and categories, that are not properly related through their 'Superior category' associations.

Creating a taxon record

5

A valid structure with proper associations from a taxon record may look like this:



Species - text field

Qualifier - Options fields

Pictures - numeric field, denoting the number of available figures, which are connected to this record. The program can handle up to 3 pictures, which are accessible through the toolbar on the bottom of the form window. The actual pictures are added by placing the in the folder **Bitmap** within the GONIAT folder. The bitmap file name must be TAXn,BMP, where n is the TaxNo. The GONIAT program currently only supports the BMP bitmap format.

Author - an association field relating to an Author record.

Pages - text field for adding year and pages information for the reference publication from the original author

Lower boundary, upper boundary - association fields connecting to records from the **Boundaries** table.

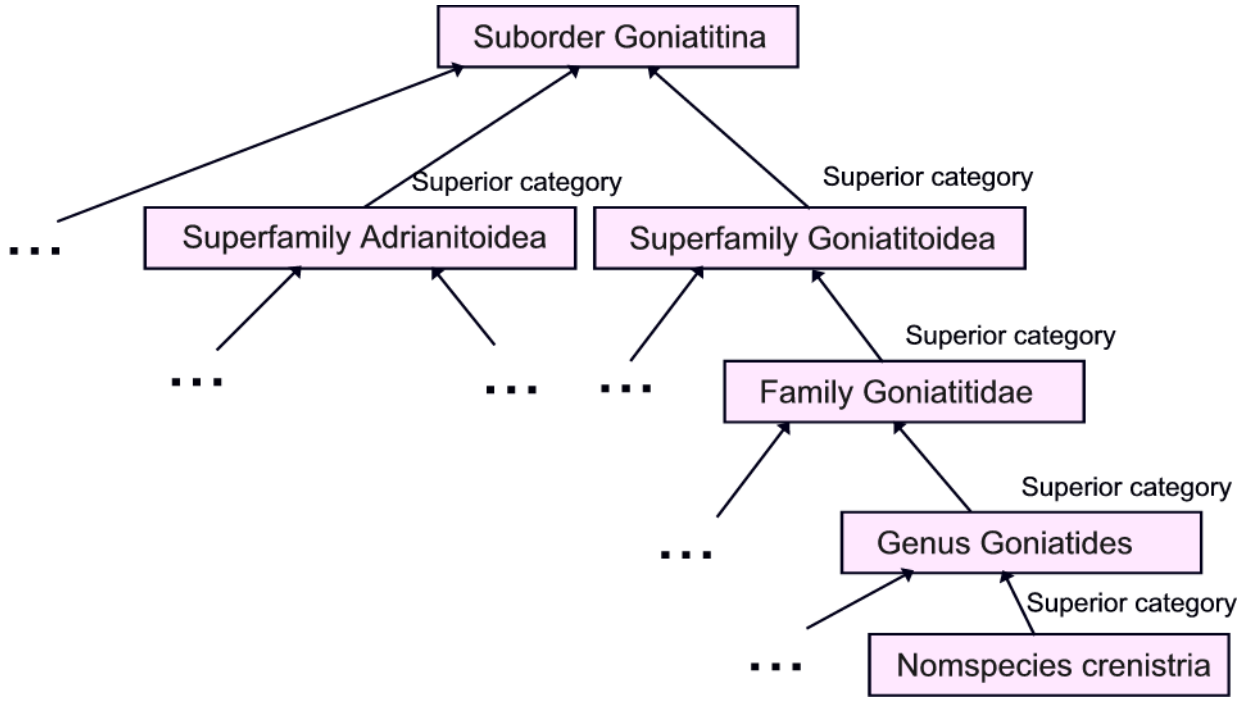
Prerequisites

Since a taxon record refers a number of records from other tables, it might be necessary to set up these records beforehand. Namely, these records are **Category** records, an **Author** record and **Boundary** records. In many cases however, the required records will already exist in the database. In this case, the existing records are used for the associations. As a general rule, before adding a taxon record, one should check the database for the required **Category**, **Author** and **Boundary** records. If any of those are missing, they need to be created first.

Categories

The records in the **Categories** table represent the levels within the taxonomical hierarchy and are set up in a hierarchical fashion. Each record refers to its parent in the hierarchy, so that they build a tree structure, which corresponds to the taxonomical hierarchy:

Creating a taxon record 5



➔ It is up to the user to take care of the consistency of this structure, i.e. the system will not check, if category types are valid etc.

Author

Adding an author record is straight-forward. Go to the authors table, press **New Record** and fill first and last name field. Finally, press the **Save Record** button. Make sure, that each author is stored only once in the database. To facilitate multiple authors in the Author field of a taxon record, one may enter multiple last names in the the corresponding field, e.g. 'Archiac_&_Verneuil' or 'Bartzsch_et_al.' Use underscore characters in place of white spaces. This form of multiple author was necessary to work around a flaw in the data model, where there is only an author reference allowed for taxa records, where it should have been an association with a literature record.

Boundaries

The structure of boundary records is also quite simple. They consist of three text fields and a numeric fields containing the age in million years.

Adding a note

Refer to *Editing a note* to see how a note is added to a record.

Creating a taxon record

5

Adding figures

To add figures to a record is a two-step process:

1.) Set the **Pictures** field to the number of available bitmap files.

2.) Place the bitmap files in the folder **Bitmap**. Their names must follow the naming convention for figures, which means that the file name is made up of 'TAX' and the TaxNo. If there is more than one bitmap file for a specific record, a letter is added to the name for all following files, starting with 'A' (Example: TAX100.BMP,TAX100A.BMP,TAX100B.BMP). Currently a maximum of three bitmap files per record is supported.

Adding associations

Taxon records can have an arbitrary number of associations with literature and locality records. To be able to set up these associations, it is necessary to create the literature and localities records beforehand. When the records to be associated to each other exist in the database, it makes no difference, which of the two records is used to set up the association. This means, the an association e.g. between a taxon record and a literature record can either be set up in the literature list of the taxon record or the taxa list of the literature record.

Refer to *Editing associations* to see how an association is added to a record.

Creating a literature record

6

To be completed.

Creating a locality record

7

To be completed.

Searching

8

To be completed.

Creating selection lists

9

To be completed.

Printing

10

To be completed.

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